



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,383	12/03/2003	Yoshihiro Someno	9281-4722	5589

7590

11/29/2005

Brinks Hofer Gilson & Lione  
P.O. Box 10395  
Chicago, IL 60610

EXAMINER
----------

LAM, CATHY FONG FONG

ART UNIT	PAPER NUMBER
----------	--------------

1775

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/726,383

Applicant(s)

SOMENO ET AL.

Examiner

Cathy Lam

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

In view of the amendment and remarks filed on September 09, 2005, the following new rejections are replacing all the previous rejections:

***Claim Rejections - 35 USC § 103***

1. Claims 15-23 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pugh, III (US 4046454) or Miller (US 3864018) in view of Li et al (US 6377732).

Applicant is reminded that claims 15-20 are product by process claims, product by process claims are not patentably distinct over product claims unless it can be shown that the product produced by the process is in some manner measurably distinct from the product produced by another process, therefore there will be no weight given to the product by process verses product claims.

Both Pugh, III and Miller teach a waveguide structure comprised of optical fibers.

Pugh teaches a plurality of chips (10,11) each has uniformly spaced V-grooves (14) formed on the chip's surface. Each groove (14) receives a single optical fiber (22) (col 2 L 17-20 & Figs. 1-2).

Miller discloses a multiple linear arrays of optical fiber. The structure is comprised of chips (10) having a plurality of spaced grooves (11) and optical fibers (15) are placed into the grooves (11) (col 2 L 35-39 & Fig. 4).

Both Pugh and Miller are silent about the optical fiber is a metallic material.

Li discloses an optical waveguide comprised of a silicon substrate (10), groove and an optical fiber (20).

A V-groove is formed in the substrate (10) and an optical fiber (20) is formed into the groove (22). The optical fiber (20) is metal coated fiber (34) (col 5 L 12-13, Figs. 2-

Art Unit: 1775

3). The examiner takes the position that the metal coated fiber is analogous to the claimed fine metallic bodies or they are elliptically shaped fine metallic bodies.

In view of the prior art teachings, it would have been obvious to fabricate a functional multilayer film with grooves (or slots) in a dielectric layer and having metallized optical fiber placed in the grooves because such arrangement is well known.

In view of the prior art teachings, it would be obvious to include two multilayer filters over and below the functional multilayer film because it is within one skill artisan's desire to couple the multilayer film with another device such as narrow bandwidth reflection filters.

***Claim Rejections - 35 USC § 112***

1. Claims 1-2, 4-9, 14, 21-29 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, applicant is suggested to change the claim language on lines 7-8 to -- wherein the plurality of fine metallic bodies are made of different materials from one another in at least one of the metal-arranged thin films --.

In claims 2 and 6, the claim language is vague and indefinite, as how can the dielectric thin film is made of a different material, since applicant is only referring to one dielectric thin film, or is the dielectric thin film a composite material? Clarification is required.

In claim 4, line 3 is suggested to be changed to – metallic bodies are made of different materials from another dielectric thin films and another plurality of fine metallic bodies, respectively, in said laminated metal-arranged thin films --.

In claim 5, at the end of line 5, applicant is suggested to insert – from another plurality of dielectric thin films and another plurality of fine metallic bodies --.

In claim 7, applicant is suggested to rewrite line 2 as – wherein the plurality of fine metallic bodies are made of different materials from one another in each metal-arranged thin film --.

In claim 8, applicant is suggested to rewrite line 4 as – dielectric films are made of different materials from one another in the region --.

In claim 9, applicant is suggested to rewrite line 4 as -- the more than one plurality of fine metallic bodies are made of different materials from one another in --.

Claims 14 and 33 are indefinite, as it is unclear how the elliptically-shaped metallic bodies are “oriented in a regular pattern”? assuming the elliptically shaped fine metallic bodies are not a long-cylindrical shape, and assuming the elliptically shaped fine metallic bodies shaped like jelly beans.

In claim 21, applicant is suggested to rewrite line 7 as -- wherein the plurality of fine metallic bodies are made of different materials from one another in at --.

Claims 22 and 34, it is unclear whether or not “elliptically-shaped fine metallic bodies” refers to a long cylindrical shaped body (ie. a wire)?

Claims 23-26, there is only one dielectric thin film mentioned, thus it is indefinite that the (only) dielectric thin film is made of a different material. Since there is no point of reference is provided. Or is applicant referring the dielectric thin film a composite?

In claim 27, applicant is suggested to rewrite line 2 to – wherein the plurality of fine metallic bodies are made of different material from one another --.

In claims 28-29, applicant is suggested to replace “a different material” to – different materials from one another --.

***Allowable Subject Matter***

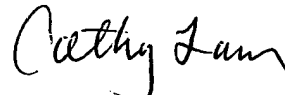
2. Claims 1-2, 4-14 and 21-33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy Lam whose telephone number is (571) 272-1538. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1775

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cathy Lam  
Primary Examiner  
Art Unit 1775

cfl  
November 25, 2005